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Director  
Office of Statewide Health Planning and Development  
Health Policy and Planning Division  
1600 9th Street, Room 433  
Sacramento, CA 95814

Dear Dr. Werdegar:

Thank you for providing the opportunity to comment on the California Hospital Outcomes Project, Heart Attack Outcomes 1991-93.

We recognize that the statistical analysis performed in this study is of exceptional quality, we are, however, concerned about the accuracy of the data being analyzed. As noted in the technical appendix, Model A is conservative and contains fewer risk factors whereas Model B is more comprehensive and includes important but potentially biased risk factors. It is highly influenced by clinical judgement and coding variations.

During the three-year period the number of "observed" deaths was 46 but further review of these medical records produced the following important findings:

1. Two of the patients had no evidence of a Myocardial Infarction - one had Congestive Heart Failure with normal cardiac enzymes and the other had Liver Cancer, confirmed by autopsy.
2. Five patients died in less than three hours from time of arrival to the emergency department. If these patients had remained in the emergency department, their deaths would not have been included in this study. To the extent that the practice of holding patients in the emergency department varies from hospital to hospital, and given that the likelihood of survival increases with time during the hospital stay, there is selection bias in the data. This is an excellent example of how patterns of care do not correlate with quality of care but certainly can effect reportable outcomes!

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3. Many examples of under coding were identified, particularly in patients who died within 24 hours. Frequently we did not code risk factors, such as cardiogenic shock, coma and seizures, thus falsely predicting a lower expected death rate. This is obviously a coding practice that we must change in order to provide accurate data for Model B.

An independent statistical analysis by Praxton Analytics Corporation pointed out for us that "During 1992, the confidence interval for Doctors Hospital's death rate did not include the state death rate. There were 14 observed deaths in 1992. If that number was 12, rather than 14, the confidence interval would have included the state's death rate. With just two outcomes swinging the assessment of performance, the application of the model to a single hospital is tenuous. For the 1991-1993 period as a whole, the difference of just three adverse outcomes changes the assessment of Doctors Hospital to **not significantly different than average**. Correcting the death total from 46 to 44, and considering the chance that even one of the patients that died early could have just as easily not been admitted underscores how sensitive - not robust - the statistics are."

In view of the limitations of this study we are confident that our community will continue to recognize the excellent quality of care provided at Doctors Hospital of Pinole.

Sincerely,



Gary Sloan  
Chief Executive Officer

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